

LISTING OF CLAIMS

1. (Currently Amended) An electrode for metal vapor-containing discharge lamps, made from a high-melting, electrically conductive material comprising a continuous pin which defines a longitudinal axis L, wherein at least one hole is arranged in the continuous pin, the hole arranged at an angle of 60 to 90 degrees with respect to the longitudinal axis, and wherein the volume of the space provided by the at least one hole is between 0.02 mm² and 2 mm².
2. (Previously Presented) The electrode as claimed in claim 1, wherein the continuous pin has a uniform, predetermined diameter D.
3. (Previously Presented) The electrode as claimed in claim 1, wherein the continuous pin comprises a shaft part and a head part and the head part has a diameter D₂ which extends beyond that of the shaft part.
4. (Previously Presented) The electrode as claimed in claim 1, wherein the hole is continuous or is in the form of a blind hole.
5. (Previously Presented) The electrode as claimed in claim 1, wherein the head part contains at most three holes.
6. (Previously Presented) The electrode as claimed in claim 1, wherein the diameter of the hole varies, the hole having a maximum diameter B.
7. (Previously Presented) The electrode as claimed in claim 6, wherein the maximum diameter is in each case approximately the same size in the case of a plurality of holes.
8. (Previously Presented) The electrode as claimed in claim 1, wherein the hole is linear.
9. (Previously Presented) The electrode as claimed in claim 1, wherein there are a

plurality of holes and wherein the plurality of holes lie in one plane.

10. (Previously Presented) The electrode as claimed in claim 9, wherein the plurality of holes are connected to one another.

11. (Previously Presented) The electrode as claimed in claim 4, wherein the continuous pin has a diameter, D , and each blind hole has a depth of at least 50% of D .

12. (Previously Presented) The electrode as claimed in claim 1, wherein the continuous pin comprises a tip and wherein the tip of the head part is rounded off.

13. (Previously Presented) The electrode as claimed in claim 1, the continuous pin comprises a tip and has a diameter D and the distance between the center of the hole and the tip is denoted by A , the ratio A/D being in the range between 1 and 6 inclusive.

14. (Previously Presented) The electrode as claimed in claim 1, wherein the hole has a diameter B and the continuous pin has a head part with diameter D and the ratio between the diameter B of the hole and the diameter D of the head part is between 0.05 and 0.3 inclusive.

15. (Previously Presented) A lamp having at least one electrode as claimed in claim 1, the lamp having a discharge vessel which contains metal vapor, the discharge vessel being produced from glass or ceramic.

16. (Currently Amended) A method for producing an electrode, in which the electrode has a pin-shaped head part having a longitudinal axis, wherein $[[a]]$ at least one hole is produced essentially transversely with respect to the longitudinal axis by short laser pulses of a maximum of 10 μs in duration and wherein the volume of the space provided by the at least one hole is between 0.02 mm² and 2 mm².

17. (Previously Presented) The method as claimed in claim 16, wherein the laser pulses

are produced by a laser beam and the laser beam is focused.

18. (Previously Presented) The method as claimed in claim 16, wherein the laser pulses have a rate of repetition and the rate of repetition of the pulses is at least 1 kHz.

19. (Previously Presented) The method as claimed in claim 17, wherein the laser beam has an energy density and the energy density of the focused laser beam is above the energy density required for sublimation of the electrode.

20. (Withdrawn) An electrode for metal vapor-containing discharge lamps, made from high-melting, electrically conductive material, comprising a shaft which defines a first longitudinal axis, and a head part which defines a second longitudinal axis, the shaft part and the head part positioned so that the second longitudinal axis is transverse to the first longitudinal axis, and in which at least one hole is positioned in the head part and arranged transversely with respect to the second longitudinal axis.